FULL-WAVE VACUUM RECTIFIER

GENERAL DATA

**Electrical:**
- Filament, Coated:
  - Voltage (AC or DC) .............. 5 volts
  - Current ...................... 3.8 amp

**Mechanical:**
- Operating Position: Vertical, or Horizontal with pins 2 and 4 in vertical plane
- Maximum Overall Length ............. 4-5/8"
- Maximum Seated Length ............. 4-1/16"
- Diameter ....................... 1.438" to 1.562"
- Bulb ................................ T12
- Base: Short Medium-Shell Octal 8-Pin with External Barriers, Style B (JEDEC Group 1, No.88-118)
  - Basing Designation for BOTTOM VIEW: ....... 5T

1. Pin 1 — No Connection
2. Pin 2 — Filament
3. Pin 3 — Same as Pin 1
4. Pin 4 — Plate No.2
5. Pin 5 — Same as Pin 1
6. Pin 6 — Plate No.1
7. Pin 7 — Same as Pin 1
8. Pin 8 — Filament

FULL-WAVE RECTIFIER

**Maximum Ratings, Design-Center Values:**
- For power-supply frequencies of 25 to 1000 cps
  - PEAK INVERSE PLATE VOLTAGE .......... 1400 max. volts
  - AC PLATE SUPPLY VOLTAGE PER PLATE (RMS) (See Rating Chart I) ........ .... 500 max. volts
  - STEADY-STATE PLATE CURRENT PER PLATE (See Rating Chart II) ................ 1.2 max. amp
  - TRANSIENT PEAK PLATE CURRENT PER PLATE (See Rating Chart III) ......... 5.5 max. amp
  - DC OUTPUT CURRENT .................. See Rating Chart I

**Typical Operation:**
- With capacitor input to filter
- With choke input to filter

**AC Plate-to-Plate**
- Supply Voltage
  - (RMS) .............. 600 850 1000 volts
- Filter-Input Capacitor .............. 40 40
- Filter-Input Choke .................
- Total Effective Plate Supply Impedance
  - Per Plate .............. 24 56
- DC Output Voltage at
  - input to filter .......... 285 430 385 volts
- DC Output Current .......... 380 350 350 ma

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
5V3
FULL-WAVE VACUUM RECTIFIER

Characteristics:
Tube-Voltage Drop for plate ma. = 350 (Per plate). 47 volts
\[ \Delta \text{AC plate supply voltage is measured without load.} \]

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RATING CHART I

E_p = 5 VOLTS AC

MAX. OPERATING VALUES:
MAX. VALUES WITH CAPACITOR AC INPUT

AREA OF PERMISSIBLE OPERATION

DC OUTPUT MILLIAMPERES PER PLATE

AC PLATE SUPPLY VOLTS (RMS) PER PLATE (WITHOUT LOAD)

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92CS-10231
RATING CHART II
CAPACITOR INPUT TO FILTER

\[ E_P = 5 \text{ VOLTS AC} \]

STEADY-STATE PEAK PLATE CURRENT PER PLATE (AMPERES) = 1.2

RECTIFICATION EFFICIENCY = \( \frac{E}{\sqrt{2} E_S} \)

WHERE \( E \) = DC OUTPUT VOLTS AT INPUT TO FILTER
\( E_S \) = AC PLATE SUPPLY VOLTS (RMS) PER PLATE (WITHOUT LOAD)

AREA OF PERMISSIBLE OPERATION